Nov. 8, 1960 P. A. ROSENQUIST ET AL 2,959,294

BOOK STALL INCLUDING RAIL SUPPORTING ADAPTER STRUCTURE

Filed Dec. 21, 1959

Fig. 1

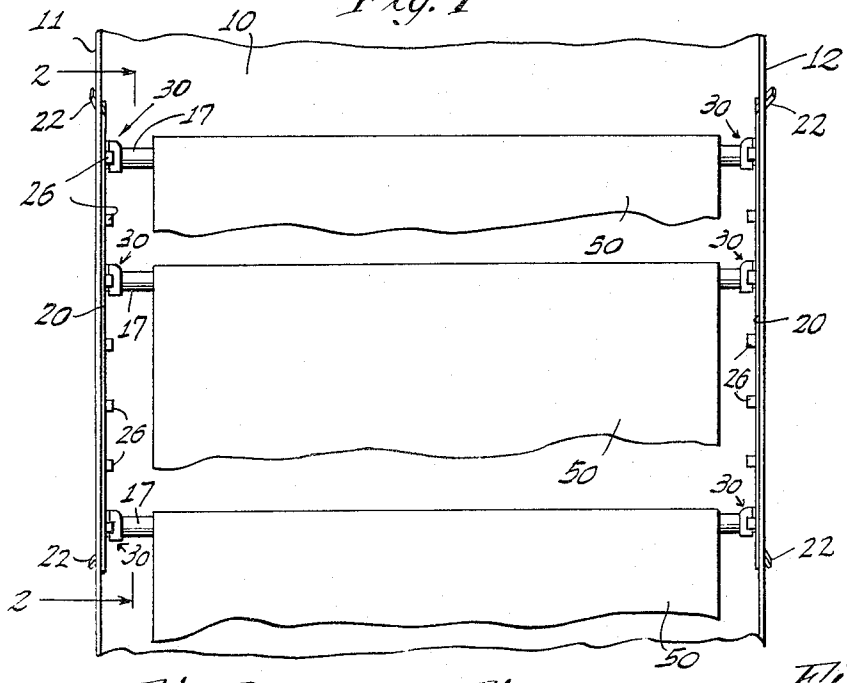


Fig. 2

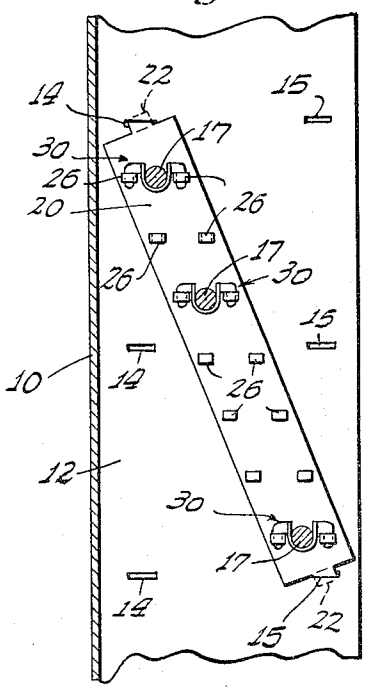


Fig. 3

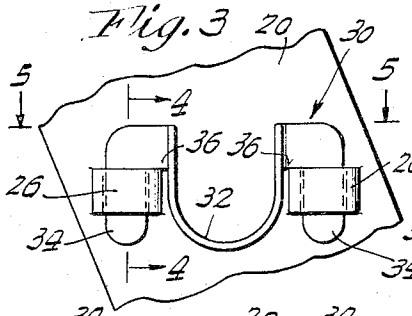


Fig. 4

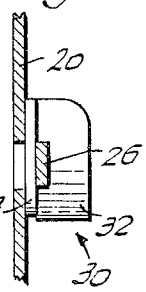


Fig. 5

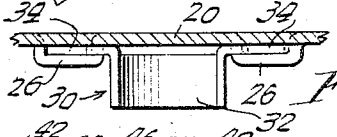
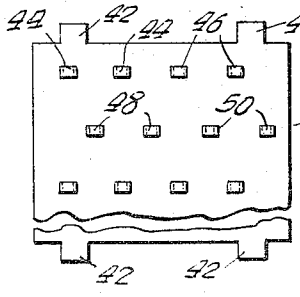


Fig. 6



INVENTORS
Paul A. Rosenquist
Raymond R. Yaegle

BY
Munn, Liddy, Daniels & March
ATTORNEYS

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BOOK STALL INCLUDING RAIL SUPPORTING ADAPTER STRUCTURE

Paul A. Rosenquist, Warren, and Raymond R. Yaegle, Tiona, Pa., assignors to Deluxe Metal Products Company, Warren, Pa., a corporation of Pennsylvania

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This invention relates to devices for supporting rails or bars in a book stall or similar piece of equipment, for the purpose of hanging newspapers or other sheet like objects from the rails.

An object of the invention is to provide a novel and improved rail supporting adapter structure by which a plurality of rails may be easily and quickly, adjustably positioned to extend between the opposite side walls of a book case, book stall or similar piece of equipment such as is commonly provided in libraries and the like for the purpose of enabling newspapers or other sheet like articles to be hung in orderly, vertically spaced relation.

A further object of the invention is to provide a novel and improved rail supporting adapter structure as above set forth, which may be readily adjustably positioned on the side walls of the book stall or the like, and which will be securely retained in place against inadvertent or unintentional dislodgment.

An additional object of the invention is to provide an improved adapter structure for rails as above characterized, which is extremely sturdy and rugged in construction, and is able to readily support appreciable weight without likelihood of failure.

Still another object of the invention is to provide an improved adapter structure as above set forth, which is constituted of relatively few components of simple construction, and which components may be easily fabricated and assembled, thereby to enable the structure to be economically produced.

A feature of the invention resides in the provision of a novel rail supporting adapter having a plurality of saddle type brackets, wherein the brackets may be easily and quickly shifted or repositioned on their supporting means to adapt the supporting structure for different purposes involving horizontally extending rails.

Another feature of the invention resides in the provision of a novel rail supporting adapter structure in accordance with the foregoing, which may be readily fabricated of inexpensive sheet metal, thereby to combine lightness of weight, small size, and structural strength with ease of fabrication.

Other features and advantages will hereinafter appear.

In the drawings accompanying this specification, similar characters of reference have been used to designate like components throughout the several views, in which:

Fig. 1 is a front elevational view, on a reduced scale, of a portion of a book stall having incorporated therein the improved rail supporting adapter structure provided by the invention.

Fig. 2 is a fragmentary vertical sectional view, taken on the line 2—2 of Fig. 1.

Fig. 3 is a fragmentary enlarged elevational view of a portion of Fig. 2, showing a support member together with a saddle type bracket as provided by the invention.

Fig. 4 is a fragmentary vertical sectional view taken on the line 4—4 of Fig. 3.

Fig. 5 is a fragmentary horizontal sectional view, taken on the line 5—5 of Fig. 3.

Fig. 6 is a fragmentary elevational view of a modified form of support member for the rail-supporting saddle brackets, a portion of the support member being broken away for convenience of illustration.

Referring first to Figs. 1 and 2 there is shown a portion

of a book case or book stall such as is commonly provided in libraries and the like, said book stall being shown as constituted of sheet metal and having a back wall 10 and side walls 11 and 12. While the figures show a simplified type of book stall construction, it will be understood that the adapter structures as provided by the invention have utility in connection with various types of stall structures, and that the simple construction illustrated is intended for purposes of illustration only.

Referring to Fig. 2, the book stall is shown as being provided with shelf supporting means in the form of pairs front and rear of horizontally extending openings or slots 14, 15 disposed at different levels in the side wall 11. The opposite side wall 12 is provided with a similar set of openings or slots 14, 15 as will be understood.

In accordance with the present invention, in conjunction with the slotted side walls 11, 12 of the book stall, there are provided novel rail supporting adapter structures by which a plurality of rails 17 may be adjustably positioned in the book stall to extend horizontally across the space between the side walls in an arrangement whereby they are vertically and horizontally offset one from the other. One such disposition of the rails 17 is illustrated in Figs. 1 and 2, and other positions of the rails may be readily effected, as will be later brought out. The present rail supporting adapter structure comprises, as seen in Figs. 1–5, a pair of flat, elongate support members 20 extending in vertical directions and disposed along the inside surfaces of the side walls 11—12, the said members constituting bracket holders for engagement by the rails 17. The support members 20 may be variously positioned on the side walls 11, 12 and are adapted to be supported thereon by means of the pairs of slots 14, 15 normally provided in the said side walls. For this purpose, the support members 20 have prongs 22 disposed at their upper and lower ends and projecting beyond the said ends, said prongs being adapted to pass through certain of the openings or slots 14, 15 in the side walls at the said different levels whereby the support members 20 are oppositely disposed and rest flat against the inner opposed surfaces of the side walls.

As seen in Fig. 2, the support member 20 may extend diagonally or at an angle with respect to the vertical, and the lower prong 22 may be passed through one of the forwardly disposed slots 15 at a lower level, whereas the upper prong 22 may be passed through one of the rearwardly disposed slots 14 at a upper level. In effecting such mounting of the support member 20 the prongs 22 may be suitably bent along diagonal lines, and upon the prongs being passed through the openings 14, 15 they may be flatted against the outer surface of the side wall of the book stall. While the support member 20 is shown as sloping rearwardly and upward in Fig. 2, it may of course be made to slope to the front instead of to the rear. In such event, the lower prongs 22 will be placed in a rear slot 14 whereas the upper prong 22 would be positioned in a front slot 15.

In accordance with the invention, the support members 20 are provided with pairs of laterally offset, substantially horizontally extending strip portions 26 which are spaced from the flat surfaces of the support members and project therefrom in directions inwardly of the stall. In Fig. 2, the pairs of strip portions 26 are shown as disposed in horizontal planes with the support member 20 extending diagonally forward. Where the support member 20 is to extend diagonally backward, the strip portions 26 may be arranged differently on the support member 20 so as to still maintain their disposition in horizontal planes which are vertically spaced one above another. However, the strip portions 26 may yet have another disposition, since they may be disposed in planes which are at right angles to the longitudinal axes of the

support members 20. Such disposition of the strip portions 26 will be further explained below.

Considering now Figs. 2–5 there is provided by the invention, to be adjustably positioned on the support members 20, a plurality of saddle type hanger brackets 30, said brackets having saddle portions 32 in the form of U-shaped carrier means, for receiving and supporting the rails 17 which extend between the support members 20 and the side walls 11, 12. The adjustably positionable saddle or hanger brackets 30 have downwardly extending, spaced flat ears 34 which are adapted to be hooked onto the strip portions 26 of the support members, in the manner illustrated in the figures. The flat ears 34 are disposed in a common plane, and are secured to the upper ends of the U-shaped carrier means or saddles 32, as clearly seen in Fig. 3.

It will now be understood that the hanger brackets 30 are removably carried by the pairs of strip portions 26, and may be easily and quickly set in place as illustrated, or else lifted away from said strip portions to position them in other places on the support members 20. As shown in Fig. 3, the upper edges of the strip portions 26 are engaged by shoulder-edges 36 disposed at the juncture of the flat ears 34 and the upper extremities of the U-shaped saddles 32. This engagement positions the saddle brackets 30 on the strip portions 26, as will be understood.

The present improved rail supporting adapter structure is especially suited for fabrication in sheet metal, as may be readily understood from the illustrations and from the description. The strip portions 26 may be lanced from the support members 20, and the hanger brackets 30 may be stamped and folded from sheet metal in a manner well understood. A suitable blanking or cut-off operation may be employed in the fabrication of the support members 20, to provide the mounting lugs 22 at the upper and lower ends thereof.

Where the strip portions 26 are disposed in vertically spaced planes which are perpendicular to the longitudinal axes of the support members 20 the saddle hangers 30 will be disposed at an angle, because of the angular or diagonal disposition of the support members. However, the saddle portions or means 32 are made sufficiently deep so that the rails 17 will be retained in the hangers even though these parts are angularly disposed instead of having the horizontal disposition illustrated in Figs. 2 and 3.

A modified form of support member is shown in Fig. 6. The member 40 illustrated therein is of generally rectangular configuration, and is provided with pairs of mounting lugs 42 at its upper and lower ends. The disposition of the mounting lugs 42 is such that they may be readily received in the front and back openings 14, 15 of the side walls 11, 12. The support member 40 is provided with pairs of horizontally extending strip portions 44, 46, 48, 50, etc. to accommodate the hanger brackets 30 whereby the latter may be variously positioned on the support members and with respect to the book stall side walls, so as to dispose the supporting rails 17 at various locations as desired.

It will now be understood from the foregoing that we have provided a novel and improved rail supporting adapter structure for use with book cases, book stalls and similar equipment, and especially as provided and utilized in libraries and the like. The said rail supporting adapter structures are seen to be simple in construction, and to involve relatively few components which may be economically fabricated and assembled. Moreover, the adapter structures may be readily supported on existing side walls of book stalls, by virtue of the openings or slots provided therein which are normally intended to accommodate shelves. By the use of the present adapter structures, the rails 17 will be strongly supported between the side walls, and yet may be readily removed at any time that this should be desired. As seen in Fig. 1, newspapers or any sheet-like articles 50 may be carried by the rails 17, and due to the staggered disposition of the rails a desirable vertical spacing will be maintained between the various sheet like articles, thereby utilizing the available space in the book stall to the greatest advantage, and with the greatest convenience to the users.

Variations and modifications may be made within the scope of the claims, and portions of the improvements may be used without others.

We claim:

1. The combination of a book stall having a pair of substantially flat side walls each of which is provided with pairs of openings disposed at different levels; a pair of flat elongate support members extending in vertical directions and constituting bracket holders, said members being arranged to be carried by the side walls at the inner sides thereof and having prongs disposed at the upper and lower ends thereof and passing through the openings of the side walls at said different levels whereby the members are oppositely disposed and rest flat against the side walls, said members having pairs of laterally offset substantially horizontally extending strip portions spaced from the flat surfaces of the members and projecting therefrom in directions inwardly of the stall; and hanger brackets removably mounted on the said support members and having saddles for receiving and supporting rails extending between the support members, said brackets comprising downwardly extending spaced flat ears hooked onto the said strip portions, and comprising U-shaped carrier means constituting the said saddles, the said means at their ends being joined to the said ears.

2. The invention as defined in claim 1, in which the pairs of strip portions are disposed at different levels and located in different vertically extending zones, thereby to locate the brackets similarly whereby the rails will have a similar disposition.

3. The invention as defined in claim 2, in which the support members are of generally rectangular configuration and extend vertically along the flat side walls.

4. The invention as defined in claim 2, in which the support members extend diagonally along the flat side walls, with respect to the vertical.

5. A support assemblage for attachment to the side wall of a book stall, comprising a flat, elongate support member adapted to extend in a vertical direction and to constitute a bracket holder, said member having prongs disposed at the upper and lower ends thereof, and extending beyond said ends for passing through openings disposed at different levels in the said side wall of the book stall whereby the member may be disposed and may rest flat against the side wall, said member having pairs of laterally off-set substantially horizontally extending strip portions spaced from the flat surfaces of the member; and hanger brackets removably mounted on the said supporting member and having saddles for receiving and supporting rails adapted to extend between the side walls of the book stall, said brackets comprising downwardly directed, spaced flat ears hooked onto the said strip portions, and comprising U-shaped means constituting the said saddles, said means at its ends carrying the said ears.

6. The invention as defined in claim 5, in which the support member is substantially rectangular in shape, and in which the strip portions are disposed in rows which extend substantially at right angles to the longitudinal axis of the member.

7. The invention as defined in claim 5, in which the strip portions of the support member are disposed in planes which are located at an acute angle with respect to the longitudinal axis of the member.

References Cited in the file of this patent

UNITED STATES PATENTS

2,233,733	Clouse	Mar. 4, 1941
2,528,358	Grass	Oct. 31, 1950